

Appn. No.: 10/501,047
Amendment Dated May 8, 2007
Reply to Office Action of February 8, 2007

JMYT-329US

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) An electrocatalyst ink comprising
 - a particulate electrocatalyst consisting of one or more optionally supported electrocatalyst metals;
 - and-one or more proton-conducting polymers; and
 - ,wherein the electrocatalyst ink further comprises particulate particles consisting of graphite which is present at a loading of 1 to 40 weight % with respect to the weight of the electrocatalyst.
2. (Currently Amended) An electrocatalyst ink according to claim 1, wherein the particulate graphite is present at a loading of 2 to 25 weight % with respect to the weight of the electrocatalyst.
3. (Currently Amended) An electrocatalyst ink according to claim 1, wherein the one or more electrocatalyst metals is platinum.
4. (Previously Presented) An electrocatalyst ink according to claim 1, wherein the electrocatalyst is either a supported metal catalyst or an unsupported finely divided metal black.
5. (Original) An electrocatalyst ink according to claim 4, wherein the electrocatalyst metal is supported on a high surface area particulate carbon.
6. (Previously Presented) An electrocatalyst ink according to claim 1 further comprising a solvent, wherein at least 75 weight % of the solvent is water.
7. (Previously Presented) An electrocatalyst ink according to claim 1, wherein the solids content of the electrocatalyst ink is between 5 and 50 weight %.

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8. (Currently Amended) An electrocatalyst ink according to claim 1, wherein the weight ratio of the electrocatalyst ~~to the one or more proton-conducting polymers~~ is between 1:1 and 10:1.
9. (Currently Amended) A process for preparing an electrocatalyst ink, said process comprising mixing ~~one or more~~ a particulate electrocatalyst consisting of one or more optionally supported electrocatalyst metals materials with one or more proton-conducting polymers and ~~a particulate~~ particles consisting of graphite in a liquid medium, wherein the particulate graphite is present at a loading of 1 to 40 weight % with respect to the weight of the electrocatalyst.
10. (Previously Presented) A process for preparing an electrocatalytic layer using an electrocatalyst ink according to claim 1, said process comprising applying the electrocatalyst ink to a substrate.
11. (Previously Presented) A gas diffusion electrode comprising a gas diffusion substrate and an electrocatalytic layer prepared using an electrocatalyst ink according to claim 1.
12. (Previously Presented) A catalyst coated membrane comprising a solid polymer membrane and an electrocatalytic layer prepared using an electrocatalyst ink according to claim 1.
13. (Previously Presented) A membrane electrode assembly comprising an electrocatalytic layer prepared using an electrocatalyst ink according to claim 1.
14. (Previously Presented) A process according to claim 9, wherein the liquid medium is aqueous.
15. (Previously Presented) A process according to claim 9, wherein the liquid medium is organic.
16. (Previously Presented) An electrocatalyst ink according to claim 1, wherein the electrocatalyst is a supported metal catalyst.
17. (Previously Presented) An electrocatalyst ink according to claim 1, wherein the electrocatalyst is an unsupported finely divided metal black.

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18. (New) An electrocatalyst ink according to claim 1, wherein none of the one or more electrocatalyst metals is supported on a graphite support.